SKRIPSI

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UJI AKTIVITAS ANTIRADIKAL BEBAS DIFENIL PIKRIL HIDRAZIL (DPPH) FRAKSI DIKLOROMETANA DAN FRAKSI METANOL AKAR DAN KULIT BATANG *Fagraea racemosa* SECARA SPEKTROFOTOMETRI

FAKULTAS FARMASI
UNIVERSITAS AIRLANGGA
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ABSTRACT

Fagraea racemosa, a medicinal plant from Borneo, reported to be used for the treatment of fever in Malaysia and India. The root of *Fagraea racemosa* has been used as a pain killer by some Kadazans, the major ethnic group of Sabah in Borneo, Malaysia. The lignans of (+)-isolariciresinol, (+)-pinoresinol, (+)-epipinoresinol and (+)-lariciresinol together with phenols such as syringaldehide and 7,8-dihydro-7-oxy-coniferyl alcohol were isolated from *Fagraea racemosa*. (+)-Pinoresinol showed analgesic effect.

Free radicals are natural products of cellular metabolism but if the levels become too high, thr damage can be caused. Free radical scavenger is a substance that, when present at low concentrations compared to that of an oxidizable substrate, significantly delay or prevents oxidation of the substrate. Our bodies have a defense system against free radical such as superoxidase, glutathion peroxidase but if the balance system of oxidation reduction in our body has been disturbed so our body needs free radical scavenger from outside to surpass the pathological conditions.

Detection of the compounds of dichloromethane (DCM) root and stem bark fraction and the methanol (MeOH) root and stem bark fraction of *Fagraea racemosa* which have free radical scavenger activity proceed with TLC-autographic assay and spectrophotometric assay. The active compounds appear as yellow spots against a purple background from DPPH solution on TLC-plates were sprayed with DPPH solution. The spectrophotometric assay : 300 µl of soln. containing the sample to be tested were added to 3 ml of a 0,004% MeOH soln. of DPPH. Absorbance at 517 nm (for MeOH fraction) and 527 nm (for DCM fraction) was determined after 30 min. and 60 min., and the percent of DPPH reduction was calculated. After the percent of DPPH reduction was calculated for each concentration and then regresi comparison $y = bx + a$ was maked. From this comparison be able to calculated the value of EC_{50} from the sample. And results has been analized using descriptif statistic.

The results showing that compounds of root and stem bark of *Fagraea racemosa* are poliphenol and terpenoid. The value of EC_{50} root DCM fraction is 297,833 ± 23,106 ppm at 30 minute and 205,548 ± 7,945 ppm at 60 minute; stem bark DCM fraction is 244,132 ± 6,958 ppm at 30 minute and 169,866 ± 3,717 ppm at 60 minute; root MeOH fraction is 335,072 ± 5,097 ppm at 30 minute and 309,373 ± 7,160 ppm at 60 minute; stem bark MeOH fraction is 161,253 ± 1,565 ppm at 30 minute and 132,413 ± 2,292 ppm at 60 minute.